

**NEW WEST****CHAPPAQUIDDICK  
JOHN GREGORY DUNNE**

# NUCLEAR NIGHTMARE

*Your Worst Fears Are True*

**BY MICHAEL SINGER AND DAVID WEIR**

*THIS is a true story. Although much of it has the ring of fiction, of doomsday novels and disaster movies, it is real. If you lived in Los Angeles in 1975, you lived through the nation's first full-scale peacetime nuclear alert.*

*And that's not even the frightening part . . .*

**Dear Mr. Hartley:**

**There is a nuclear device with a potential of 20 kilotons concealed on one of your valuable properties electronically controlled in Los Angeles County. . . .**

***[Turn to Page 15]***





# SANTA CRUZ

A place where foxes are barely as large as house cats, but blue jays grow almost

**L**ARGEST AND MOST VARIED of the eight Santa Barbara Channel Islands, Santa Cruz Island provides a fragile, and endangered, habitat for unique plant and animal life. Industrial water use and supertanker traffic to and from Santa Barbara's offshore oil wells, as well as to the oil fields in Alaska—traffic which will be greatly increased if the liquified natural gas terminal at Point Conception goes into operation—upsets delicately balanced water temperatures necessary for the marine life surrounding Santa Cruz Island. Sonic booms and shock waves from the Space Shuttle System at nearby Vandenberg Air Force Base could result in seriously decreased bird and seal populations by interrupting brooding patterns and by causing aberrant animal behavior that leads to infant mortality. Congressman Robert Lagomarsino and Senator Alan Cranston have recently introduced bills to designate the five northernmost Channel Islands (Santa Cruz, Santa Rosa, Anacapa, San Mi-

Feral sheep (below) present a serious problem to the island. The sheep were introduced as ranch animals in the 1850s, but have become wild, multiplying at a yearly rate of up to two lambs per ewe. They decimate the more browsable native grasses, creating empty niches to be grabbed up by tenacious flora, such as sweet fennel. The sheep cause dramatic erosion in the canyons and are threatening the continued existence of the pine forests, among other vegetation. The Santa Cruz Island pine compensates for its relatively short life by bearing great numbers of seed cones. They are closed cones, however, and need the heat of regular brush fires to release their seeds. Now the sheep retard a fire's potential by eating everything that serves as dry fuel. Additionally, they eat up the occasional seedling that has managed to sprout by other means. The control of the sheep—estimated to number anywhere from 10,000 to 15,000 strong—is a first priority for the island's preservation, but has been greatly complicated by difficult terrain.





# ISLAND

By Judith James

Illustrated by  
Stephen Lyman

as big as crows. A great "evolutionary factory," to be studied, and preserved.

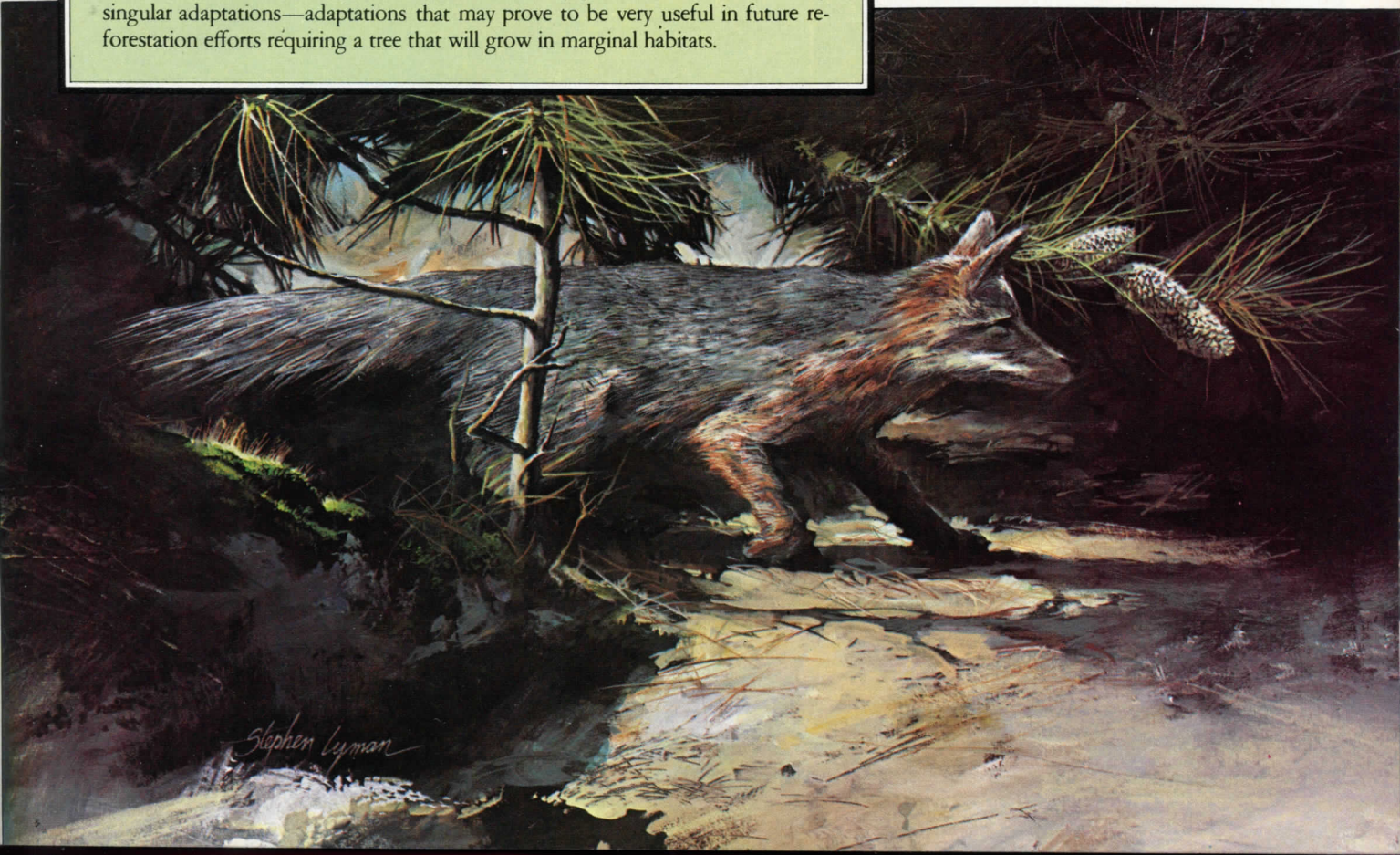
*guel and Santa Barbara) as a new national park. That, along with the work of a national nonprofit conservation organization, the Nature Conservancy, has begun to put Santa Cruz Island and the evolutionary and ecological secrets it holds within our grasp.*

**T**WENTY-THREE MILES SOUTH of Santa Barbara, Santa Cruz Island is 96 square miles of mountains, valleys, grasslands, canyons, tidepools and babbling brooks that are still in almost prehistoric condition; Chumash Indian and fossil sites are everywhere. The first impression one gets on Santa Cruz is the sense of raw beauty and pure, unrefracted sound. In the office, on the freeway, it's hard to particularize concepts like

*"environmental significance" or "the conservation of the diversity of life," but when you are following a brook up a sweet-smelling canyon shot through with shafts of sunlight, moved by the knowledge that there are only ten other human*  
(Text continues on page 44)

**N**either the Santa Cruz Island fox nor the Santa Cruz Island pine (both illustrated below) exist anywhere else in the world. Instead of standing still in time as some island species have, or evolving exactly as their mainland cousins did, today's Santa Cruz populations diverged enough to become separate entities. The sweet, diminutive fox, hardly the size of a domestic cat, may be related to the tiny Yucatan gray fox, or it may be a relative of the larger California gray fox. If the latter, it is a perfect example of dwarfism, an evolutionary condition exhibited by larger animals confined to island conditions. However, it is not clear why the larger fox has not yet been found in fossil remains on the island. Some even speculate that instead of the island fox getting smaller, the mainland fox got larger.

The Santa Cruz Island pine resembles the Bishop pine, but it has made many singular adaptations—adaptations that may prove to be very useful in future reforestation efforts requiring a tree that will grow in marginal habitats.





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*"... After 7,000 years of Indian occupancy, Santa Cruz Island passed over to pirates and prisoners ..."*

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beings on the island, the concepts become real. We have so rapidly altered places like Santa Cruz Island that they are gone before we have a chance to know what good they might have done for us emotionally, intellectually or in the matter of survival itself.

The Nature Conservancy is quite certain that these are valid reasons for the preservation of natural lands, and it has been involved in a unique approach to the environmental issue since 1951. In the early 1950s, the then small Arlington, Virginia, group became dismayed at the slow process of lobbying and consciousness-raising and simply began buying the land it was fighting for. Today it owns or has protected nearly 1,527,293 acres of ecologically significant forest, swamp, marshland, prairies, mountains and beaches in 2,171 separate projects throughout the United States, the Caribbean and Latin America.

The organization has attracted to its ranks finance, tax and real estate experts; lawyers; ecologists; biologists and foresters. More than once they have plunked down cash moments before land supporting a vanishing species was to be sold for development. Some of the acreage is acquired from families who still retain certain rights and who had thought that they could not afford *not* to sell to developers. Other land is held for a short time, with the knowledge that government agencies too slow to move on their own will eventually provide funds for it.

Funding comes from contributions, foundation grants, membership dues and corporate gifts. Local chapters are set up specifically to manage and fund a preserve. Some preserves receive professional caretaking and restoring. On most, after a study to determine the fragility of the ecosystem has been completed, students, hikers and photographers are welcome guests.

With the cooperation of state agencies and other conservation groups, the conservancy is developing a national inventory of the habitats of unique plants and animals. It is no wonder that it was interested in the Channel Islands and Santa Cruz itself.

The eight Channel Islands, four each in the northern and southern groupings, are fascinating in their characteristically insular phenomena. Santa Cruz particularly is like a mini-continent, as interesting for what it shares with the mainland as for what it does not. As a refuge for rare and/or ancient species, and as an evolutionary factory, it poses mysterious questions and provides a multitude of answers for anyone curious about either biological minutiae or the larger path of life itself. It contains the most diverse habitat of any Channel Island, and through a fortunate combination of minimal and responsible human use it has been allowed to

exist pretty much untouched.

Passing from more than 7,000 years of Chumash Indian occupancy to a brief period of pirate and penal colonies, Santa Cruz became a one-family sheep and cattle ranch in the late 1800s. Though it had fallen into disuse by the 1930s, it is now ranched again, 6,000 acres of it by the heirs of the original ranch family, and 54,488 acres by Dr. Carey Stanton. Stanton has spent considerable time and money trying to minimize the devastating affects of feral sheep grazing and has allowed the establishment of a University of California research station. Under a joint conservation effort with the conservancy, he sold some land and granted a conservation easement over the rest for \$2.5 million, an amount well below the land's real estate value. The conservancy has raised an additional \$1.1 million endowment fund, bringing the total cost for purchase and perpetual safeguarding to an amazingly low \$72 an acre. Management begins with a biological inventory and will include studies and plans, due sometime in 1980, in the areas of protection, research, educational and public use, and historical/archaeological preservation. The organization is presently experimenting with field trips of no more than 30 people, who are broken up into groups of five, each led by a naturalist guide.

Even if you don't understand the ecological significance of Santa Cruz, it is a dramatic experience. We approached the island by boat, circling around the gnarled northwestern tip and pounding through enormous waves to beach below acres of treeless grassland and cantilevered cliffs. Abalone-encrusted boulders hulked behind us, far out in the crashing spray. A whole flock of brown pelicans wheeled a wide arc overhead.

We motored along the northern coast, where huge, green-velvet knuckles support an occasional tree bonsaied by the wind, to anchor in Prisoner's Harbor. We set off up a narrow canyon with Ken Wiley, the preserve manager, leading the way. Changes wrought by recent flash flooding had rendered the 40-foot canyon wall treacherous going, but we managed to scale it anyway, discussing the remarkable nature around us as we went.

Walking down a ridge on our way to examine the pine forest, peripherally aware of the footprints of a fox and the stares of some sheep, I thought about how fortunate it is that the Nature Conservancy exists and that this island will neither be destroyed nor closed away. Under its patient and direct stewardship, we will be able to share and benefit from the tremendous amount of information locked away on Santa Cruz. ■

*For information, field trips and donations, contact the Nature Conservancy, P.O. Box 217, Santa Barbara, CA 93102.*